

Arizona Early Learning Standards rev. 2018	Teaching Strategies GOLD Objectives	STAR Lessons and Activities	Themes First Lessons	Routine Essentials Lessons
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MATHEMATICS

Strand 1: Counting and Cardinality

Concept 1: Counts Out Loud

a. Shows interest in and awareness of counting.	20. Uses number concepts and operations 20a. Counts	L2 Pre-academic Lesson 1, 2 L3 Pre-academic Lesson 1	Independent Work: Math	Independent Work Systems Circle: Calendar
b. Rote counts zero to ten and beyond with increasing accuracy.	20. Uses number concepts and operations 20a. Counts 38: Demonstrates progress in speaking English	L2 Pre-academic Lesson 1, 2 L3 Pre-academic Lesson 1	Independent Work: Math	Circle: Calendar

Concept 2: Knows Number Names and Symbols

a. Uses numerals and number symbols in the context of daily routines, activities, and play.	12. Remembers and connects experiences 12b. Makes connections	L2 Receptive Language Lesson 8 L3 Receptive Language Lesson 7	Independent Work: Math	Circle: Calendar
b. Uses and creates symbols to represent numbers.	20. Uses number concepts and operations 20c. Connects numerals with their quantities	L2 Pre-academic Lesson 3, 12 L3 Pre-academic Lesson 3	Independent Work: Math	Circle
c. Uses a variety of materials (i.e. clay, sand, shaving cream) to write and form numerals and numeral-like symbols.	7. Demonstrates fine-motor strength and coordination 7a. Uses fingers and hands 20. Uses number concepts and operations 20c. Connects numerals with their quantities	L2 Pre-academic Lesson 3 L3 Pre-academic Lesson 3	Independent Work: Math	Independent Work Systems Circle
d. Identifies numerals zero to ten.	20. Uses number concepts and operations 20c. Connects numerals with their quantities 38: Demonstrates progress in speaking English	L2 Pre-academic Lesson 3 L3 Pre-academic Lesson 2, 4	Independent Work: Math	Independent Work Systems Circle: Calendar
e. Differentiates some written numerals from written letters.	20. Uses number concepts and operations 20c. Connects numerals with their quantities	L2 Receptive Language Lesson 7 L2 Pre-academic Lesson 3		Independent Work Systems

Concept 3: Compares Numbers and Quantities

a. Compares two sets of objects using terms such as greater than, less than, or equal to.	13. Uses classification skills 20. Uses number concepts and operations 20b. Quantifies	L2 Pre-academic Lesson 3 L3 Pre-academic Lesson 3	Independent Work: Math	Independent Work Systems Circle: Calendar
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Concept 4: Counts to Tell Number of Objects				
a. Identifies quantities of three to five objects without counting using visual approximation (Subitize).	20. Uses number concepts and operations 20b. Quantifies	L2 Pre-academic Lesson 5 L3 Pre-academic Lesson 4	Independent Work: Math	Circle: Calendar
b. Demonstrates the ability to match object to object in a group (One-to-one correspondence).	20. Uses number concepts and operations 20a. Counts	L1 Receptive Language Lesson 7 L2 Pre-academic Lesson 6 L3 Pre-academic Lesson 4	Independent Work: Math	Independent Work Systems Circle: Calendar
c. Counts groups of objects using a number word for each object (Rational counting).	7. Demonstrates fine-motor strength and coordination 7a. Uses fingers and hands 20. Uses number concepts and operations 20a. Counts	L2 Pre-academic Lesson 4, 6 L3 Pre-academic Lesson 4	Independent Work: Math	Independent Work Systems Circle: Calendar
d. Counts a collection of up to ten items using the last counting word to tell, "How many?" (Cardinality)	20. Uses number concepts and operations 20a. Counts	L2 Pre-academic Lesson 2, 4	Independent Work: Math	Independent Work Systems Circle: Calendar
e. Matches numerals to quantities using manipulatives.	20. Uses number concepts and operations 20c. Connects numerals with their quantities	L2 Pre-academic Lesson 1, 2 L3 Pre-academic Lesson 4	Independent Work: Math	Independent Work Systems Circle: Calendar

Strand 2: Operations and Algebraic Thinking				
Concept 1: Explores Addition and Subtraction				
a. Recognizes that adding increases the number of objects in a group.	20. Uses number concepts and operations 20b. Quantifies	L3 Pre-academic Lesson 5	Independent Work: Math	Independent Work Systems Calendar
b. Describes changes in two or more sets of objects when they are combined.	20. Uses number concepts and operations 20b. Quantifies	L3 Expressive Language Lesson 3 L3 Pre-academic Lesson 5, 6	Independent Work: Math	
c. Recognizes that taking away (subtracting) decreases the number of objects in a group	20. Uses number concepts and operations 20b. Quantifies	L3 Pre-academic Lesson 6	Independent Work: Math	Independent Work Systems Calendar
d. Describes changes in a set of objects when they are separated into parts.	20. Uses number concepts and operations 20b. Quantifies	L3 Expressive Language Lesson 3 L3 Pre-academic Lesson 5, 6	Independent Work: Math	
e. Counts on from the larger number for addition.	20. Uses number concepts and operations 20b. Quantifies	L2 Pre-academic Lesson 5	Independent Work: Math	Independent Work Systems Calendar

Concept 2: Patterning				
a. Recognizes patterns in the real world.	12. Remembers and connects experiences 12b. Makes connections 23. Demonstrates knowledge of patterns	L2 Play & Social Interaction Lesson 5	Independent Work: Math	Independent Work Systems Circle
b. Fixes simple patterns.	23. Demonstrates knowledge of patterns		Independent Work: Math	Independent Work Systems: Circle
c. Duplicates simple patterns.	7. Demonstrates fine-motor strength and coordination 7a. Uses fingers and hands 23. Demonstrates knowledge of patterns		Independent Work: Math	Independent Work Systems Circle: Calendar
d. Extends patterns.	23. Demonstrates knowledge of patterns	L2 Pre-academic Lesson 5	Independent Work: Math	Independent Work Systems Circle: Calendar
e. Creates patterns.	7. Demonstrates fine-motor strength and coordination 7a. Uses fingers and hands 23. Demonstrates knowledge of patterns	L2 Pre-academic Lesson 14 L3 Pre-academic Lesson 17	Independent Work: Math	Independent Work Systems Circle: Calendar
f. Describes similarities and differences in patterns.	13. Uses classification skills 23. Demonstrates knowledge of patterns 38. Demonstrates progress in speaking English	L3 Expressive Lesson 3	Independent Work: Math	Circle: Calendar

Strand 3: Measurement and Data				
Concept 1: Sorts and Classifies				
a. Sorts and classifies objects by one or more attributes (e.g., size, color, shape, texture, use).	12. Remembers and connects experiences 12b. Makes connections 13. Uses classification skills	L1 Receptive Language Lesson 7-10 L1 Pre-academic Lesson 2, 3 L2 Receptive Language Lesson 7, 8	Independent Work: Math	Independent Work Systems Calendar
b. Explains how items were sorted into groups.	9. Uses language to express thoughts and needs 9a. Uses and expanding expressive vocabulary 38. Demonstrates progress in speaking English	L2 Expressive Language Lesson 3, 7	Independent Work: Math	Independent Work Systems Calendar

Concept 2: Data Analysis				
a. Asks questions to gather measurable data.	9. Uses language to express thoughts and needs 9a. Uses and expanding expressive vocabulary 11. Demonstrates positive approaches to learning 11d. Shows curiosity and motivation 38. Demonstrates progress in speaking English	L3 Spontaneous Language Lesson 3 L3 Functional Routines 5, 6	Group Work: Games Independent Work: Math	
b. Displays data to answer simple questions about themselves or the environment.	14. Uses symbols and images to represent something not present 14a. Thinks symbolically	L2 Expressive Language Lesson 6-10 L2 Pre-academic, Lesson 14	Group Work: Science Independent Work: Writing	
c. Uses descriptive language to compare data in picture graphs or other concrete representations.	14. Uses symbols and images to represent something not present 14a. Thinks symbolically	L2 Expressive Language Lesson 1-5 L3 Expressive Language Lesson 1-4		Independent Work: Writing
d. Analyzes data from charts and graphs to answer questions.	14. Uses symbols and images to represent something not present 14a. Thinks symbolically	L3 Expressive Language Lesson 11		Group Work: Science Independent Work: Writing

Concept 3: Measures

a. Compares objects and uses terms (e.g. lighter-heavier, hotter-colder, and faster-slower).	12. Remembers and connects experiences 12b. Makes connections 22. Compares and measures	L3 Receptive Language Lesson 3, 4 L3 Expressive Language Lesson 3, 4	Group Work: Cooking Independent Work: Math	Independent Work Systems Circle: Calendar Circle: Music Circle: PE
b. Uses non-standard units of measurement (e.g., hands, bodies, containers) to estimate measurable attributes.	7. Demonstrates fine-motor strength and coordination 7a. Uses fingers and hands 22. Compares and measures	L3 Play & Social Interactions Lesson 2	Group Work: Cooking	
c. Uses various standard measuring tools for simple measuring tasks.	7. Demonstrates fine-motor strength and coordination 7a. Uses fingers and hands 22. Compares and measures	L2 Receptive Language Lesson 5	Group Work Cooking	Independent Work Systems Circle: Calendar
c. Orders objects by measurable attributes.	22. Compares and measures	L2 Receptive Language Lesson 10 L3 Receptive Language Lesson 7	Independent Work: Math	Independent Work Systems Circle: Calendar
d. Uses appropriate vocabulary to describe time and sequence related to daily routines (e.g. tomorrow, yesterday, next, this morning).	12. Remembers and connects experiences 12b. Makes connections 22. Compares and measures 38: Demonstrates progress in speaking English	L3 Pre-academic Lesson 8		Independent Work Systems Circle: Calendar

Strand 4: Geometry				
Concept 1: Shapes				
a. Recognizes basic two-dimensional shapes when presented in different orientations.	12. Remembers and connects experiences 12b. Makes connections 21. Explores and describes spatial relationships and shapes 21b. Understands shapes	L1 Pre-academic Lesson 3 L2 Receptive Language Lesson 1, 2	Independent Work: Math	Independent Work Systems Circle: Calendar
b. Uses the names of geometric shapes when describing objects found in the environment.	21. Explores and describes spatial relationships and shapes 21b. Understands shapes 38. Demonstrates progress in speaking English	L2 Expressive Language Lesson 2, 3	Independent Work: Math	Independent Work Systems Circle: Calendar
c. Creates two-dimensional shapes during play.	21. Explores and describes spatial relationships and shapes 21b. Understands shapes	L3 Play & Social Interaction Lesson 1, 2	Independent Work: Math	
d. Creates three-dimensional (solid) shapes during play.	7. Demonstrates fine-motor strength and coordination 7a. Uses fingers and hands 21. Explores and describes spatial relationships and shapes 21b. Understands shapes	L3 Play & Social Interaction Lesson 1, 2	Independent Work: Math	
e. Compares, describes, analyzes, and sorts two- and three- dimensional objects in the environment using formal and informal mathematical language with prompting and support based on their attributes.	12. Remembers and connects experiences 12b. Makes connections 13. Uses classification skills 21. Explores and describes spatial relationships and shapes 21b. Understands shapes 38. Demonstrates progress in speaking English	L2 Receptive Language Lesson 7 L2 Expressive Language Lesson 2 L3 Expressive Language Lesson 3, 4 L3 Spontaneous Language Lesson 3	Group Work: Games Independent Work: Math	Independent Work Systems

Concept 2: Spatial Reasoning				
a. Uses and responds to spatial language (e.g., between, inside, under, above, behind).	21. Explores and describes spatial relationships and shapes 21a. Understands spatial relationships	L3 Receptive Language Lesson 2 L3 Expressive Language Lesson 2	Group Work: Games Independent Work: Math	Independent Work Systems Circle: Calendar Circle: Music Circle: PE
b. Describes the relative position or location of objects in relation to self or to other objects with mathematical precision.	21. Explores and describes spatial relationships and shapes 21a. Understands spatial relationships	L3 Expressive Language Lesson 2-4 L3 Spontaneous Language Lesson 3	Group Work: Games Independent Work: Math	Independent Work Systems